

O P E
MAY 24 2001

PATENT & TRADEMARK OFFICE

Applicant : Paulraj et al
Appl. No. : 09/464,372

Filed : 12/15/98

Title : Method and Wireless System using Multiple Antennas and Adaptive Control for Maximizing a Communication Parameter

Grp./A.U. : 2734

Examiner : Jiang, L.

Docket No. : GWI-102

Honorable Commissioner for Patents
Washington DC 20231

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7/a
H. M. Lee
531-01

RESPONSE TO ACTION

Sir:

In response to the Office action of 2/14/01, please reconsider the above-identified application in view of the following amendments and/or remarks.

AMENDMENT

In the Specification:

Please replace the paragraph beginning at line 19 of page 5 with the following rewritten paragraph:

—The last two patents certainly go far in the direction of adaptively changing multiple antenna systems to optimize performance with varying channel conditions. However, further improvements are desirable. In particular, it would be desirable to develop a system where both the transmit unit and receive unit take full advantage of multiple antennas to not only adaptively change the modulation and/or coding but also use a suitable diversity scheme, and spatial multiplexing order all at the same time. These adaptive changes would help to ensure that the communication parameters of the channel remain maximized while the channel varies. Furthermore, it would be an advance in the art to develop a communications system which could take advantage of multiple antennas at the transmit and receive unit to adapt to changing channel conditions and maximize any of a number of desirable communication parameters such as data capacity, signal-to-noise ratio and throughput. This would permit the system to continuously adapt to the type of data being transmitted via the channel. —

Please replace the paragraph beginning at line 10 of page 6 with the following rewritten paragraph: